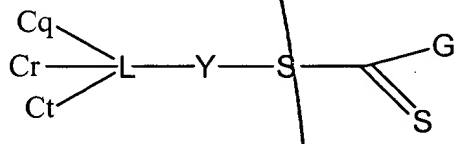
bonding an iniferter initiator to a substrate surface at one or more points to form a derivatized surface, said iniferter initiator comprising an initiator-control agent adduct having the formula:



wherein C is a moiety on the surface of the substrate; L is a linker group capable of bonding to at least one C moiety; q, r and t are independently 0 or 1, provided the sum of q + r + t is at least 1; Y is a residue capable of initiating free radical polymerization upon UV initiated cleavage of the Y-S bond; S is sulfur; and, G is a nitrogen or an oxygen heteroatom;

contacting said derivatized surface with a composition comprising a water-soluble or water-dispersible free radically polymerizable monomer mixture, the mixture containing an acrylamide-based monomer and at least 1 other monomer, under reaction conditions to form bound polymer chains comprising a water-dispersible segment having a weight average molecular weight of at least about 1000 and one or more functionalized sites thereon, the functionalized site(s) being formed in its(their) active state for reaction with a probe selective for the biological molecule; and

bonding the probe to the bound polymer chains through the active functionalized sites.

Please substitute the following for claim 19:

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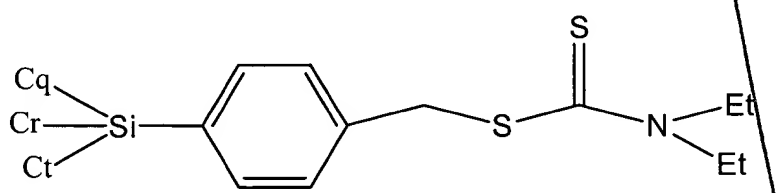
19. (amended) The method according to claim 18 wherein said bound iniferter initiator comprises an initiator-control agent adduct having the formula:



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wherein Et is ethyl.

Please add new claims 26-28:

26. (new) The method according to claim 17 further comprising separating unbound polymer after said derivatized surface is contacted with a composition comprising the monomer mixture to form polymer chains.

27. (new) The method according to claim 26 wherein the monomer mixture additionally contains an unbound iniferter initiator.

28. (new) The sensor of one of preceding claims 17-27.